

2/2 011

UNCLASSIFIED

PROCESSING DATE--13NOV70

CIRC ACCESSION NO--AP0123014

ABSTRACT/EXTRACT--(U) GP-0- ABSTRACT. SO . ISOTHERMS (40DEGREES) OF
COX,UREA,H SUB2 O SYSTEMS WHERE X IS NITRATE OR SULFATE AND OF CO(NO
SUB3) SUB2,CO(SO SUB4),UREA,H SUB2 O WERE DETD. AND THEIR DIAGRAMS ARE
GIVEN. THE TERNARY SYSTEM OF CO(NO SUB3) SUB2 FORMS 2 NEW COMPOS. CO(NO
SUB3) SUB2 .6 UREA AND CO(NO SUB3) SUB2 .10 UREA. CONGRUENTLY SOL. CO(SO
SUB4) .2 UREA .4H SUB2 O FORMS IN THE TERNARY SYSTEM OF CO(SO SUB4). THE
QUATERNARY SYSTEM FORMS CO(NO SUB3) SUB2 .4CO(SO SUB4) .20 UREA.2H SUB2 O.

UNCLASSIFIED

BESKROVANOV, V. V.

SVFS 69268

6-13

VI-5. RELATIVE GROWTH RATE OF THE <111> AND <100> PYRAMIDS AND DEFECT DISTRIBUTION IN NATURAL DIAMONDS

Article by V. V. Trubin, V. V. Beskrovanov, Yakuski Novosibirsk, 111 St. Petersburg, 12-17 June, 1972, p. 761. Poluprovodnikovii Kristalloi i Plazma, Russian.

The relative growth rate of <100> pyramids was determined by the correlation of these pyramids, and the relative growth rate of <111> pyramids were determined by the thickness of the simultaneously growing layers. Diamonds were photographed in the light of their luminescence of the transmitted absorption light. The negative were photometrically measured and the distribution in the <111> and <100> of the relative density of the luminescence at absorption center determined. It was established that with an increase in the growth rate of <111> pyramids the density of the centers of blue luminescence in the <111> pyramids almost linearly, the correlation factor of relation was established between their density in the <100> pyramids and the growth rate of this pyramid, $r = 0.89$. By holding with the impurity nature of the luminescence center and the ratio of the law it follows that for an impurity re- sponse for blue luminescence $K < 1$, and for an impurity response for green or yellow luminescence $K > 1$, and for an impurity response for the entry of the impurity into the crystal. Repetition with the defect distribution law it follows that the natural diamonds of cubic habit (with yellow and green luminescence characteristic of them) grew with relatively smaller superimpositions than diamonds of octahedral habit (with blue luminescence characteristic of them). The established nonuniformity of the growth rates of the different pyramids <111> and <100> at the same time of their growth for a defined diamond (and the corresponding variations in defect density) is explained as a result of the differences in temperature and supersaturation at different faces of this crystal and also as a result of different defectiveness (dislocation density, face roughness, and so on) of its faces. The investigation of the distribution of nitrogen A-centers of absorption (N-A) demonstrated the correlation between the density distribution of the A-centers and the centers of blue luminescence (N-A) in the <111> pyramids.

1/2 020 UNCLASSIFIED PROCESSING DATE--16OCT70
TITLE--DEVELOPMENT OF AROMATIC HYDROCARBON INDUCED TUMORS OF THE MAMMARY
GLAND IN RATS -U-
AUTHOR-(03)-BESKROVNYI, A.M., BRESLAVSKIY, A.S., SUKACHEVA, O.A.
COUNTRY OF INFO--USSR
SOURCE--VOP. ONKOL. 1970, 16(2), 55-63
DATE PUBLISHED-----70
SUBJECT AREAS--BIOLOGICAL AND MEDICAL SCIENCES
TOPIC TAGS--TUMOR, CARCINOGEN, AROMATIC HYDROCARBON, HISTOCHEMISTRY,
REPRODUCTIVE SYSTEM
CONTROL MARKING--NO RESTRICTIONS
DOCUMENT CLASS--UNCLASSIFIED
PROXY REEL/FRA--1995/2042 STEP NO--UR/0506/70/016/002/0059/0063
CIRC ACCESSION NO--AP0117285
UNCLASSIFIED

2/2 020 UNCLASSIFIED PROCESSING DATE--16OCT70
CIRC ACCESSION NO--AP0117285
ABSTRACT/EXTRACT--(U) GP-O- ABSTRACT. A STUDY WAS MADE OF PATTERNS OF
GROWTH AND HISTOL. STRUCTURE OF TUMORS OF THE AMMMARY GLAND, INDUCED IN
WISTAR FEMALE RATS BY ORAL ADMINISTRATION OF
9,10,DIMETHYL,1,2,BENZ(ALPHA)ANTHRACENE (1). THE TUMORS APPEARED AT
85-90PERCENT OF CASES, IN AN AV. OF 36 DAYS AFTER 3 ADMINISTRATION OF
THE CARCINOGEN. OF 200 CASES, SPONTANEOUS REGRESSION OCCURRED IN 61
WITH COMPLETE DISAPPERANCE OF THE TUMOR IN 29. IN 45 CASES, HOWEVER,
THE REGRESSION WAS TEMPORARY. A DISTINCT DEPENDENCE BETWEEN THE RATE
OF REGRESSION AND THE SIZE OF THE TUMOR WAS FOUND; SMALLER (I.E.,
YOUNGER) TUMORS HAD A HIGH INCIDENCE OF REGRESSION AND DISAPPEARANCE.
WHEN THE TUMOR REACHED A CERTAIN CRIT. SIZE, DISTINCT MALIGNIZATION
OCCURRED, THE TUMORS GREW CONTINUOUSLY AND CAUSED DEATH OF THE ANIMAL.
HISTOL. EXAMNS. SHOWED THAT I INDUCED TUMORS ARE INITIALLY PRECANCEROUS,
AND ONLY BECOME MALIGNANT IN LATER STAGES. FACILITY: INST. EXP.
CLIN. UNCOL., MOSCOW, USSR.

UNCLASSIFIED

USSR

UDC: 621.375.4.089.52-503.22:517.27

B
BESKROVNIY, I. M., ZABASHTA, P. T., NOVIKOV, A. F.

"Sensitivity Optimization of a Transistorized Amplifier with Negative Feedback"

V sb. Poluprovodn. pribory v tekhn. elektrosvyazi (Semiconductor Devices in Electrical Communications Technology--collection of works), Vyp. 5, Moscow, "Svyaz", 1970, pp 159-165 (from RZh-Radiotekhnika, No 7, Jul 70, Abstract No 7D102)

Translation: Relationships are given which are used to optimize transistorized amplifiers with respect to minimum sensitivity of the transfer coefficient to a change in transistor gain h_{21e} in a common-emitter circuit. Resumé.

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- 27 -

Acc. Nr:

AP0050722

Abstracting Service:

INTERNAT. AEROSPACE ABST 5-70

Ref. Code:

UR 0170

A70-23871 # Solution of unsteady transport problems by the flux method (Reshenie nestatsionarnykh zadach po perenosu metodom potokov). I. M. Beskrovnyi (Akademiia Nauk Kazakhskoi SSR, Institut Iadernoi Fiziki, Alma-Ata, Kazakh SSR). *Inzhenerno-Fizicheskii Zhurnal*, vol. 18, Jan. 1970, p. 162-166. 6 refs. In Russian.

Description of a system of flux equations which is completely equivalent to the so-called P sub 1 approximation of the single-velocity Boltzmann equation. The proposed system features a faster solution of unsteady transport problems than that of the diffusion equation. The use of the system is illustrated for problems involving the propagation of a concentration discontinuity through a plane layer.

T.M.

40

REEL/FRAME
19810720

21

VORONKIN, M. A. and BESOV, A. V.

"10th All-Union Conference on Powder Metallurgy"

Kiev, Poroshkovaya metallurgiya, No 5, May 71, pp 103-105

Abstract: An account is given of the work of the 10th All-Union Conference on Powder Metallurgy, which was held in Kiev on 19-22 January 1971 and organized by the Scientific Council on Powder Metallurgy, the powder metallurgy section of the Central Administration of the Scientific-Technical Society of the Machinery Industry, the Institute of Problems of Material Science, the Academy of Sciences Ukr SSR and by the Kiev House of Scientific-Technical Propaganda. It was attended by 385 representatives from 98 Soviet cities and 150 organizations. Eighteen survey reports on important problems and trends in powder metallurgy were presented. Twenty-eight reports on problems of the development and introduction of methods for the production of powders, forming the sintering of new kinds of metal-ceramic materials and items were presented. Particular attention was given to problems of the development and application of metal-ceramic products.

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- 16 -

1/2 1011
UNCLASSIFIED
TITLE--SOLUBILITY IN UREA, COBALT NITRATE, COBALT SULFATE, WATER SYSTEMS AT
40 DEGREES -U-
AUTHOR--(021)--KONDRATYEVA, N.G., BESKOV, S.D.

COUNTRY OF INFO--USSR

SOURCE--ZH. NEORG. KHIM. 1970, 15(4), 1090-3

DATE PUBLISHED-----70

SUBJECT AREAS--CHEMISTRY

TOPIC TAGS--COBALT COMPOUND, NITRATE, SOLUBILITY, SULFATE, UREA

CONTROL MARKING--NO RESTRICTIONS

DOCUMENT CLASS--UNCLASSIFIED
PROXY REEL/FRA--1999/1112

STEP NO--UR/0078/70/015/004/1090/1093

CIRC ACCESSION NO--AP0123014

UNCLASSIFIED

2/2 011

UNCLASSIFIED

PROCESSING DATE--13NOV70

CIRC ACCESSION NO--AP0123014

ABSTRACT/EXTRACT--(U) GP-0- ABSTRACT. SOLY. ISOTHERMS (40DEGREES) OF COX,UREA,H SUB2 O SYSTEMS WHERE X IS NITRATE OR SULFATE AND OF CO(NO SUB3) SUB2,CO(SO SUB4),UREA,H SUB2 O WERE DETD. AND THEIR DIAGRAMS ARE GIVEN. THE TERNARY SYSTEM OF CO(NO SUB3) SUB2 FORMS 2 NEW COMPOS. CO(NO SUB3) SUB2 .6 UREA AND CO(NO SUB3) SUB2 .10 UREA. CONGRUENTLY SOL. COSO SUB4 .2 UREA .4H SUB2 O FORMS IN THE TERNARY SYSTEM OF COSO SUB4. THE QUATERNARY SYSTEM FORMS CO(NO SUB3) SUB2 .4COSO SUB4 .20 UREA.2H SUB2 O.

UNCLASSIFIED

BESKROVANOVA, V. V.

SPAS 69268
6-13

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VI-5. RELATIVE GROWTH RATE OF THE <111> AND <100> PYRAMIDS AND DEFECT DISTRIBUTION IN NATURAL DIAMONDS

Article by V. I. Trubin, V. V. Beskrovnova, Yakushev, Norosibirsk, III Symposium on Progresses in the Field of Polymers, 1972, p. 76j.

The relative growth rate of <100> pyramids was determined by the comparison of these pyramids, and the relative growth rate of <100> pyramids was determined by the thickness of the simultaneously growing layers. Diamonds were photographed in the light of their luminescence or the transmitted monochromatic light. The negatives were photometrically measured and the distribution in the <111> and <100> of the relative density of the luminescence or absorption centers was determined. It was established that with an increase in the growth rate of the <111> pyramids, the density of the centers of blue luminescence in this pyramid increases almost linearly, the correlation factor (r) is equal to 0.9. For centers of yellow and green luminescence, the inverse relation was established between their density in the <100> pyramid and the growth rate of this pyramid, $r = 0.88$. Beginning with the impurity nature of the luminescence centers and the Porto-Reppert law it follows that for an impurity responsible for blue luminescence $K < 1$, and for an impurity responsible for green or yellow luminescence $K > 1$. K is the distribution factor characterizing the entry of the impurity into the crystal. Beginning with the defect distribution law it follows that the natural diamonds of cubic habit (with yellow and green luminescence characteristic of them) grew with relatively smaller imperfections than diamonds of octahedral habit (with blue luminescence characteristic of them). The established nonuniformity of the growth rates of the different pyramids <111> and <100> at the same time of their growth for a defined diamond (and the corresponding variations in defect density) is explained as a result of the differences in temperature and supersaturation at different faces of this crystal and also as a result of different defectiveness (dislocation density, face roughness, and so on) of its faces. The investigation of the distribution of nitrogen A-centers of absorption (340) demonstrated the inverse relation between the density distribution of the A-centers and the centers of blue luminescence (415) in the <111> pyramids.

1/2 020 UNCLASSIFIED PROCESSING DATE--16OCT70
TITLE--DEVELOPMENT OF AROMATIC HYDROCARBON INDUCED TUMORS OF THE MAMMARY
GLAND IN RATS -U-
AUTHOR-(93)-BESKROVNYI, A.M., BRESLAVSKIY, A.S., SUKACHEVA, O.A.
COUNTRY OF INFO--USSR
SOURCE--VOP. ONKOL. 1970, 16(2), 59-63
DATE PUBLISHED-----70

SUBJECT AREAS--BIOLOGICAL AND MEDICAL SCIENCES
TOPIC TAGS--TUMOR, CARCINOGEN, AROMATIC HYDROCARBON, HISTOCHEMISTRY,
REPRODUCTIVE SYSTEM

CONTROL MARKING--NO RESTRICTIONS

DOCUMENT CLASS--UNCLASSIFIED
PROXY REEL/FRAE--1995/2042

STEP NO--UR/0506/70/016/002/0059/0063

CIRC ACCESSION NO--AP0117285

UNCLASSIFIED

2/2 020

UNCLASSIFIED

PROCESSING DATE--16OCT70

CIRC ACCESSION NO--AP0117285

ABSTRACT/EXTRACT--(U) GP-0- ABSTRACT. A STUDY WAS MADE OF PATTERNS OF GROWTH AND HISTOL. STRUCTURE OF TUMORS OF THE AMMARY GLAND, INDUCED IN WISTAR FEMALE RATS BY ORAL ADMINISTRATION OF 9,10-DIMETHYL,1,2,BENZ(ALPHA)ANTHRACENE (1). THE TUMORS APPEARED AT 85-90PERCENT OF CASES, IN AN AV. OF 36 DAYS AFTER 3 ADMINISTRATION OF THE CARCINOGEN. OF 200 CASES, SPONTANEOUS REGRESSION OCCURRED IN 61 WITH COMPLETE DISAPPERANCE OF THE TUMOR IN 29. IN 45 CASES, HOWEVER, THE REGRESSION WAS TEMPORARY. A DISTINCT DEPENDENCE BETWEEN THE RATE OF REGRESSION AND THE SIZE OF THE TUMOR WAS FOUND; SMALLER (I.E., YOUNGER) TUMORS HAD A HIGH INCIDENCE OF REGRESSION AND DISAPPEARANCE. WHEN THE TUMOR REACHED A CERTAIN CRIT. SIZE, DISTINCT MALIGNIZATION OCCURRED, THE TUMORS GREW CONTINUOUSLY AND CAUSED DEATH OF THE ANIMAL. HISTOL. EXAMNS. SHOWED THAT 1 INDUCED TUMORS ARE INITIALLY PRECANCEROUS, AND ONLY BECOME MALIGNANT IN LATER STAGES. FACILITY: INST. EXP. CLIN. UNCOL., MOSCOW, USSR.

UNCLASSIFIED

USSR

UDC: 621.375.4.089.52-503.22:517.27

B
BESKROVNIY, I. M., ZABASHTA, P. T., NOVIKOV, A. F.

"Sensitivity Optimization of a Transistorized Amplifier with Negative Feedback"

V sb. Poluprovodn. pribory v tekhn. elektrosvyazi (Semiconductor Devices in Electrical Communications Technology--collection of works), Vyp. 5, Moscow, "Svyaz'", 1970, pp 159-165 (from RZh-Radiotekhnika, No 7, Jul 70, Abstract No 7D102)

Translation: Relationships are given which are used to optimize transistorized amplifiers with respect to minimum sensitivity of the transfer coefficient to a change in transistor gain h_{21e} in a common-emitter circuit. Resumé.

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- 27 -

Acc. Nr:

AP0050722

Abstracting Service:

INTERNAT. AEROSPACE ABST

Ref. Code:

5-70 UR 0170

13
A70-23871 # Solution of unsteady transport problems by the flux method (Reshenie nestatsionarnykh zadach po perenosu metodom potokov). I. M. Beskrovnyi (Akademiia Nauk Kazakhskoi SSR, Institut Iadernoi Fiziki, Alma-Ata, Kazakh SSR). Inzhenerno-Fizicheskii Zhurnal, vol. 18, Jan. 1970, p. 162-166, 6 refs. In Russian.

Description of a system of flux equations which is completely equivalent to the so-called P sub 1 approximation of the single-velocity Boltzmann equation. The proposed system features a faster solution of unsteady transport problems than that of the diffusion equation. The use of the system is illustrated for problems involving the propagation of a concentration discontinuity through a plane layer.
T.M.

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REEL/FRAME
19810720

USSR

VORONKIN, M. A. and BESOV, A. V.

"10th All-Union Conference on Powder Metallurgy"

Kiev, Poroshkovaya metallurgiya, No 5, May 71, pp 103-105

Abstract: An account is given of the work of the 10th All-Union Conference on Powder Metallurgy, which was held in Kiev on 19-22 January 1971 and organized by the Scientific Council on Powder Metallurgy, the powder metallurgy section of the Central Administration of the Scientific-Technical Society of the Machinery Industry, the Institute of Problems of Material Science, the Academy of Sciences Ukr SSR and by the Kiev House of Scientific-Technical Propaganda. It was attended by 385 representatives from 98 Soviet cities and 150 organizations. Eighteen survey reports on important problems and trends in powder metallurgy were presented. Twenty-eight reports on problems of the development and introduction of methods for the production of powders, forming the sintering of new kinds of metal-ceramic materials and items were presented. Particular attention was given to problems of the development and application of metal-ceramic products.

USSR

UDC: 517.514

BESOV, O. V., IL'IN, V. P.

"Natural Expansion of a Class of Areas in Imbedding Theorems"

Teoremy Vlozheniya i Ikh Prilozheniya [Imbedding Theorems and Their Applications -- Collection of Works], Moscow, Nauka Press, 1970, pp 21-23, (Translated from Referativnyy Zhurnal Matematika, No. 8, 1970, Abstract #8875, by the authors).

Translation: It is shown that it is possible to expand a class of areas for which the imbedding theorem is formulated as for the entire space.

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UDC 546.185

USSR

KOSINSKAYA, I. M., PINCHUK, A. M., SHEVCHENKO, V. I., and BESPAL'KO, G. K.

"Phenyldichloro- and Diphenylchlorophosphazocyanoalkanes"

Leningrad, Zhurnal Obshchey Khimii, Vol 43 (105), No 9, Sep 73, pp 1903-1906

Abstract: Replacement of one chlorine atom by a phenyl radical in tri-chlorophosphazocyanoalkanes does not prevent their conversion to tricyclic compounds in a reaction with hydrogen chloride, but lowers drastically the thermal stability of the products. The presence of two phenyl radicals in the phosphazo group stops completely the conversion of the phosphazocyanoalkanes into tricyclic compounds.

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- 35 -

1/2 028 UNCLASSIFIED PROCESSING DATE--27NOV70
TITLE--FRACTIONATION DURING THE SUBLIMATION OF MIXTURES OF AN ANTIMONY
SESQUISULFIDE ANTIMONY SESQUIOXIDE SYSTEM -U-
AUTHOR--(03)-NADEZHINA, L.S., GRINZAYD, YE.L., BESPALENKOVA, YE.K.

COUNTRY OF INFO--USSR

SOURCE--ZH. PRIKL. KHIM. (LENINGRAD) 1970, 43(4), 874-6

DATE PUBLISHED-----70

SUBJECT AREAS--CHEMISTRY

TOPIC TAGS--SUBLIMATION, ANTIMONY COMPOUND, METAL OXIDE, SULFIDE, SURFACE
FILM, CHEMICAL DEPOSITION, METAL VAPOR DEPOSITION, COMPLEX COMPOUND

CONTROL MARKING--NO RESTRICTIONS

DOCUMENT CLASS--UNCLASSIFIED
PROXY REEL/FRA--3001/0427

STEP NO--UR/0080/70/043/004/0874/0876

CIRC ACCESSION NO--AP0126180

UNCLASSIFIED

2/2 028
CIRC ACCESSION NO--AP0126180
ABSTRACT/EXTRACT--(U) GP-0-
VACUUM DEPOSITED SB SUB2 S SUB3 FILMS WERE STUDIED. THE VOLATILIZATION
OF SB SUB2 S SUB3 FROM THE SOLID SB SUB2 S SUB3 SB SUB2 O SUB3 MIXT.
OCCURS AS PARTICLES OF COMPLEX COMPN. PARTIAL VAPORIZATION RATE VS.
COMPN. DIAGRAMS WERE USED TO EST. THE DEGREE OF SB SUB2 O SUB3
ENRICHMENT OF THE SUBLIMATE. THE SUBLIMATE IS ENRICHED IN O FOR ALL
COMPNS. OF THIS SYSTEM. FACILITY: Leningrad. POLITEKH. INST.
IM. KALININA, Leningrad, USSR.

UNCLASSIFIED

PROCESSING DATE--27NOV70

UNCLASSIFIED

1/2 010
TITLE--VAPOR PRESSURE OVER ANTIMONY SESQUISULFIDE ANTIMONY SESQUIOXIDE
MIXTURES -U-
AUTHOR--(03)-GRINZAYO, YE.L., NADEZHINA, L.S., BESPALENKOVA, E.K.
COUNTRY OF INFO--USSR
SOURCE--ZH. NEORG. KHIM. 1970, 15(2), 317-18
DATE PUBLISHED-----70
SUBJECT AREAS--CHEMISTRY
TOPIC TAGS--ANTIMONY COMPOUND, SULFIDE, OXIDE, VAPOR PRESSURE
CONTROL MARKING--NO RESTRICTIONS
DOCUMENT CLASS--UNCLASSIFIED
PROXY REEL/FRA--1996/1954
SECTION NO--AP0118916
UNCLASSIFIED
STEP NO--UR/0078/70/015/002/0317/0318
PROCESSING DATE--

UNCLASSIFIED

PROCESSING DATE--30OCT70

2/2 010

CIRC ACCESSION NO--AP0118916

ABSTRACT/EXTRACT--(U) GP-O-

ABSTRACT. THE RATE OF EVAPN. IN A SB SUB2 O
SUB3-SB SUB2 S SUB3 SYSTEM WAS DETD. GRAVIMETRICALLY AND A DIAGRAM OF
TOTAL AND PARTIAL EVAPN. OF THE SYSTEM IS PRESENTED GRAPHICALLY. SB
SUB2 S SUB3 HAS AN ABNORMAL CURVE OF PARTIAL VAPOR PRESSURE FOR A WIDE
RANGE OF CONCN. THE PARTIAL VAPOR PRESSURE OF SB SUB2 O SUB3 SHOWS A
POS. DEVIATION FROM RAULT'S LAW. THE DATA IMPLY FORMATION OF AN
UNIDENTIFIED OXYSULFIDE IN THE VAPOR PHASE. FACILITY:
LENINGRAD. POLITEKH. INST., LENINGRAD, USSR.

UNCLASSIFIED

USSR

UDC 666.22:539.551

B

4

NEMILOV, S. V., KRYLOVA, L. A., ROMANOVA, N. V., ZHUKOVA, A. N., ALEKSEYEVA, R. A.,
NOVIKOVA, M. P., BESPAL'KO, Z. P., and TYNYANKINA, A. N.

"Viscosity of Optical Glasses"

Leningrad, Zhurnal Prikladnoy Khimii, Vol 43, No 6, Jun 70, pp 1218-1225

Abstract: The viscosity η of 120 grades of glass ($\eta = 10^2 - 10^{13}$ poises) in relation to the temperature was determined. The results are listed in tables showing values of $\lg \eta$ for various temperatures t . The values included in the tables were obtained in part by interpolation and extrapolation of experimental values to cover the complete $\eta = 10^1 - 10^{16}$ poises range ($t = 312-2010^\circ$). Determinations at $10^4 - 10^{13}$ poises were carried out by the method of pressing in described earlier, those at $10^1 - 10^4$ poises by means of GOI automatic rotational viscosimeters. Measurements of η carried out by the first method on glass No 710 of the USA National Bureau of Standards led to results which coincided with those reported by A. Napolitano and E. G. Hawkins, J. Res. Nat. Bur. Stand., A. Phys. p. Ch., 69A, 439, 1964. The rotational viscosimeters were calibrated at $10^2 - 10^4$ poises on the basis of values reported for glass No 710. Data obtained for B_2O_3 by means of these viscosimeters agreed with those reported in the literature. A glass with the composition SiO_2 69.60, B_2O_3 11.09, Al_2O_3 2.00, As_2O_3 0.10, BaO 0.65, CaO 1.37, 1/2

USSR

NEMILOV, S. V., et al., Zhurnal Prikladnoy Khimii, Vol 43, No 6, Jun 70,
pp 1218-1225

MgO 0.80, K₂O 4.16, Na₂O 10.23 mole % was formulated, measurements on which
in the $10^2 - 10^{13}$ poises ($t = 600-1300^\circ$) range led to results that were readily
reproducible.

1/2 012 UNCLASSIFIED PROCESSING DATE--02 OCT 70
TITLE--REACTION OF DICHLOROCARBENE WITH 2, PHENYL, 1,3, BUTADIENE -U-
AUTHOR--(02)-KUSTIKOV, R.R., BESPALOV, A.YA.
COUNTRY OF INFO--USSR **B**
SOURCE--ZH. ORG. KHIM. 1970, 6(3) 629
DATE PUBLISHED-----70
SUBJECT AREAS--CHEMISTRY
TOPIC TAGS--CHLORINATED ORGANIC COMPOUND, BENZENE DERIVATIVE, BUTADIENE,
CYCLOPROPANE, OXIDATION, CARBOXYLIC ACID
CONTROL MARKING--NO RESTRICTIONS
DOCUMENT CLASS--UNCLASSIFIED
PROXY PEEL/FRAE--1992/1544 STEP NO--UR/0366/70/006/003/0629/0629
CIRC ACCESSION NO--AP0112538
UNCLASSIFIED

2/2 012

UNCLASSIFIED

PROCESSING DATE--02OCT70

CIRC ACCESSION NO--AP0112538

ABSTRACT/EXTRACT--(U) GP-0-

ABSTRACT.

THE REACTION OF H SUB2 C:CPHCH:CH
SUB2 WITH CL SUB2 C: (PREPD. FROM NAOME AND CL SUB3 CCO SUB2 ET) GAVE
1,1,DICHLORO, 2,PHENYL,2,VINYLCYCLOPROPANE (I). OXIDN. OF I WITH KMNO
SUB4 GAVE 1,1,DICHLORO,2,PHENYLCYCLOPROP,1,YLCARBOXYLIC ACID. CATALYTIC
HYDROGENATION OF I GAVE 1,1DICHLORO,2,ETHYL,2,PHENYLCYCLOPROPANE, ALSO
PREPD. BY REACTING H SUB2 C:CPHET WITH CL SUB2 C:.

UNCLASSIFIED

89

USSR

UDC 546.185

KOSINSKAYA, I. M., PINCHUK, A. M., SHEVCHENKO, V. I., and BESPAL'NO, G. K.

"Phenylchloro- and Diphenylchlorophosphazocycanoalkanes"

Leningrad, Chemical Exchange Khimii, Vol 43 (105), No 9, Sep 73, pp 1903-1906

Abstract: Replacement of one chlorine atom by a phenyl radical in tetra-chlorophosphazocycanoalkanes does not prevent their conversion to tricyclic compounds in a reaction with hydrogen chloride, but lowers drastically the thermal stability of the products. The presence of two phenyl radicals in the molecule significantly accelerates the conversion of the phosphazocycano-

2/2 028

UNCLASSIFIED

PROCESSING DATE--27NOV70

CIRC ACCESSION NO--AP0126180

ABSTRACT/EXTRACT--(U) GP-O- ABSTRACT. THE COMPN. AND STRUCTURE OF THIN VACUUM DEPOSITED SB SUB2 S SUB3 FILMS WERE STUDIED. THE VOLATILIZATION OF SB SUB2 S SUB3 FROM THE SOLID SB SUB2 S SUB3 SB SUB2 O SUB3 MIXT. OCCURS AS PARTICLES OF COMPLEX COMPN. PARTIAL VAPORIZATION RATE VS. COMPN. DIAGRAMS WERE USED TO EST. THE DEGREE OF SB SUB2 O SUB3 ENRICHMENT OF THE SUBLIMATE. THE SUBLIMATE IS ENRICHED IN O FOR ALL COMPNS. OF THIS SYSTEM. FACILITY: LENINGRAD. POLITEKH. INST. IM. KALININA, LENINGRAD, USSR.

UNCLASSIFIED

1/2 010 UNCLASSIFIED PROCESSING DATE--30OCT70
TITLE--VAPOR PRESSURE OVER ANTIMONY SESQUISULFIDE ANTIMONY SESQUIOXIDE
MIXTURES -U-
AUTHOR-(03)-GRINZAYD, YE.L., NADEZHINA, L.S., BESPALENKOVA, E.K.
COUNTRY OF INFO--USSR
SOURCE--ZH. NEORG. KHIM. 1970, 15(2), 317-18
DATE PUBLISHED-----70
SUBJECT AREAS--CHEMISTRY
TOPIC TAGS---ANTIMONY COMPOUND, SULFIDE, OXIDE, VAPOR PRESSURE
CONTROL MARKING--NO RESTRICTIONS
DOCUMENT CLASS--UNCLASSIFIED
PROXY REEL/FRA--1996/1954 STEP NO--UR/0078/70/015/002/0317/0318
CIRC ACCESSION NO--AP0118916
UNCLASSIFIED

2/2 010

UNCLASSIFIED

PROCESSING DATE--30OCT70

CIRC ACCESSION NO--AP0118916

ABSTRACT/EXTRACT--(U) GP-0- ABSTRACT. THE RATE OF EVAPN. IN A SB SUB2 O SUB3-SB SUB2 S SUB3 SYSTEM WAS DETD. GRAVIMETRICALLY AND A DIAGRAM OF TOTAL AND PARTIAL EVAPN. OF THE SYSTEM IS PRESENTED GRAPHICALLY. SB SUB2 S SUB3 HAS AN ABNORMAL CURVE OF PARTIAL VAPOR PRESSURE FOR A WIDE RANGE OF CONC. THE PARTIAL VAPOR PRESSURE OF SB SUB2 O SUB3 SHOWS A POS. DEVIATION FROM RAULT'S LAW. THE DATA IMPLY FORMATION OF AN UNIDENTIFIED OXYSULFIDE IN THE VAPOR PHASE. FACILITY: LENINGRAD. POLITEKH. INST., LENINGRAD, USSR.

UNCLASSIFIED

USSR

UDC 666.22:539.551

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NEMILOV, S. V., KRYLOVA, L. A., ROMANOVA, N. V., ZHUKOVA, A. N., ALEKSEYEVA, R. A.,
NOVIKOVA, M. P., BESPAL'KO, Z. P., and TYNYANKINA, A. N.

"Viscosity of Optical Glasses"

Leningrad, Zhurnal Prikladnoy Khimii, Vol 43, No 6, Jun 70, pp 1218-1225

Abstract: The viscosity η of 120 grades of glass ($\eta = 10^2 - 10^{13}$ poises) in relation to the temperature was determined. The results are listed in tables showing values of $\lg \eta$ for various temperatures t . The values included in the tables were obtained in part by interpolation and extrapolation of experimental values to cover the complete $\eta = 10^1 - 10^{10}$ poises range ($t = 312-2010^\circ$). Determinations at $10^4 - 10^{13}$ poises were carried out by the method of pressing in described earlier, those at $10^1 - 10^4$ poises by means of GOI automatic rotational viscosimeters. Measurements of η carried out by the first method on glass No 710 of the USA National Bureau of Standards led to results which coincided with those reported by A. Napolitano and E. G. Hawkins, J. Res. Nat. Bur. Stand., A. Phys. a. Ch., 68A, 439, 1964. The rotational viscosimeters were calibrated at $10^2 - 10^4$ poises on the basis of values reported for glass No 710. Data obtained for B_2O_3 by means of these viscosimeters agreed with those reported in the literature. A glass with the composition SiO_2 69.60, B_2O_3 11.09, Al_2O_3 2.00, As_2O_3 0.10, BaO 0.65, CaO 1.37,

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USSR

NEMILOV, S. V., et al., Zhurnal Prikladnoy Khimii, Vol 43, No 6, Jun 70,
pp 1218-1225

MgO 0.80, K₂O 4.16, Na₂O 10.23 mole % was formulated, measurements on which
in the $10^2 - 10^{13}$ poises² (t = 600-1300°) range led to results that were readily
reproducible.

2/2

1/2 012 UNCLASSIFIED PROCESSING DATE--02 OCT 70
TITLE--REACTION OF DICHLOROCARBENE WITH 2-PHENYL, 1,3-BUTADIENE -U-
AUTHOR--(02)-KOSTIKOV, R.R., BESPALOV, A.YA.
COUNTRY OF INFO--USSR
SOURCE--ZH. ORG. KHIM. 1970, 6(3) 629
DATE PUBLISHED-----70
SUBJECT AREAS--CHEMISTRY
TOPIC TAGS--CHLORINATED ORGANIC COMPOUND, BENZENE DERIVATIVE, BUTADIENE,
CYCLOPROPANE, OXIDATION, CARBOXYLIC ACID
CONTROL MARKING--NO RESTRICTIONS
DOCUMENT CLASS--UNCLASSIFIED
PROXY FEEL/FRAME--1992/1544 STEP NO--UR/0366/70/006/003/0629/0429
CIRC ACCESSION NO--AP0112538
UNCLASSIFIED

2/2 012

UNCLASSIFIED

PROCESSING DATE--02OCT70

CIRC ACCESSION NO--AP0112538

ABSTRACT/EXTRACT--(U) GP-0- ABSTRACT. THE REACTION OF H SUB2 C:CPHCH:CH
SUB2 WITH CL SUB2 C: (PREP. FROM NAOMI AND CL SUB3 CCO SUB2 ET) GAVE
1,1,DICHLORO, 2,PHENYL,2,VINYLCYCLOPROPANE (I). OXID. OF I WITH KMNO
SUB4 GAVE 1,1,DICHLORO,2,PHENYLCYCLOPROP,1,YLCARBOXYLIC ACID. CATALYTIC
HYDROGENATION OF I GAVE 1,1DICHLORO,2,ETHYL,2,PHENYLCYCLOPROPANE, ALSO
PREP. BY REACTING H SUB2 C:CPHET WITH CL SUB2 C:.

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UNCLASSIFIED

BESPALOV, D. F.

JPRS 55568
29 MAR 72

UDC: 550.84

NEUTRON PULSE METHODS IN GEOPHYSICS

[Article by candidates of Technical Sciences D. F. Bespalov and V. V. Miller and Doctor of Physical and Mathematical Sciences Yu. S. Shimelevich; Moscow, *Vestnik Akademii Nauk SSSR*, Russian, Vol 42, No 1, January 1972, pp 39-43]

Study of the elementary composition and properties of rocks under the conditions in which they are situated naturally is an important stage in searches for and surveys of mineral deposits and also in control of their working. Among the geophysical methods used for that, a special place belongs to neutronic methods. Neutron sounding gives multifaceted information about the composition and properties of rocks. In addition, neutrons and the gamma-quanta caused by them have a relatively great penetrating capacity, thanks to which the investigated body of matter is rather large and substantially exceeds the dimensions of a drillhole.

Neutronic methods of investigating drillholes were born in 1940, when B. N. Poutserve proposed a neutronic method of distinguishing collectors (porous strata containing petroleum or water). Initially, Ra-Be or Po-Be sources of neutrons were used, which give a flux of these particles continuous in time. The distinguishing of collectors in a profile of the drillhole is based on the gradual moderation power of hydrogen, which causes changes in the indications of the detector registering the density of thermal neutrons at a certain distance from the source. With these methods, it is also possible to distinguish strata saturated with petroleum and strongly mineralized stratal water, which is based on difference in the absorption of thermal neutrons. Salts containing elements with a large neutron-absorption cross-section, mainly chlorine, are dissolved in the mineralized stratal water. The measuring instrument notes change either of the density of the thermal neutrons or of the intensity of the gamma-radiation of radiative neutron capture.

(over)

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USSR

UDC: 536.46:533.6

BESPALOV, I. V.

"Structure of the Combustion Zone in a Turbulent Boundary Layer on a Permeable Wall"

V sb. Vopr. teorii goreniiya (Problems of Combustion Theory--collection of works), Moscow, "Nauka", 1970, pp 29-40 (from RZh-Mekhanika, No 4, Apr 71, Abstract No 4B788)

Translation: The paper presents the results of an experimental study of the combustion of propane forced through the permeable wall of a tube or flat plate into a stream of air. Stable burning was maintained by pilot lights. Measurements were made of the state of the gas, the time-averaged flow temperature, the instantaneous value of the flow temperature determined by a quick-response resistance thermometer, and short-exposure shadow photographs of the flame were also made. It was found that there are considerable concentrations of the products of incomplete combustion and oxygen close to the wall, which implies that an appreciable part is played by chemical kinetics under the given conditions. The measured

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BESPALOV, I. V., Vopr. teorii goreniya, Moscow, "Nauka", 1970, pp 29-40

maximum time-averaged temperature was appreciably lower than the equilibrium combustion temperature with the stoichiometric composition, which is attributed to chaotic oscillations of the flame front. These oscillations are observed in photography of the flame and in measurement of the instantaneous gas temperature. Conclusions relating to flame development lengthwise of the channel are not very well illustrated by experimental data.
V. A. Frost.

USSR

UDC 621.385.032.21 (088.8)

BESPALOV, K. I., PAL'CHEVSKIY, B. A.

"Study of the Quality of Adhesion of Oxide Coating to a Cathode Base"

Elektron.tekhnika. Nauch.-tekhn.sb. Tekhnol. i organiz. proiz-va
(Electronics Technology. Scientific-Technical Collection. Technology and Organization of Production), 1971, No 5(45), pp 121-126 (from RZh:Elektronika i yeye primeneniye, No 2, Feb 72, Abstract No 2A106)

Translation: The quality of adhesion of a coating to a cathode base /kern/ was studied with the use of various adhesive compositions and a choice of the optimum composition of the adhesive and optimum conditions of sticking. The results are presented of a study of the dependence of the magnitude of the bonding strength on the content in the adhesive composition of dioctyl phthalate (DOP) or polymethyl methacrylate (PM), and also the effect of the stocking conditions on the quality of production of printed cathodes. The magnitude of the initial bonding strength is increased in direct proportion to the increase of the quantity of
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USSR

BESPALOV, K. I., et al, Elektron.tekhnika. Nauch.-tekhn.sb. Tekhnol. i organiz. proiz-va, 1971, No 5(45), pp 121-126

PM in the adhesive composition. The magnitude of the critical bonding strength is increased with an increase of the content of DOP or PM up to a fixed limit, after which a further increase of the DOP or PM content in the adhesive composition leads to an abrupt decrease of the magnitude of the critical bonding strength and the reliability of the adhesion. Optimum adhesive compositions in acetone are 1/5 DOP and 1/10 PM. A decrease of the bonding, beginning with the fixed composition of PM in the adhesive composition, can be explained by the increase of the thickness of the anticontact film of PM between the coating and the cathode base. Similarly, a change of the magnitude of the bonding strength is observed for an adhesive composition with DOP. Use of close pressing /podpressovka/ with compressed air decreases the thickness of the anticontact film. For the adhesive compositions selected the optimum pressure is 3 atm. 4 references.

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Acc. Nr: **1700330 1**

Ref. Code: UR 0056

PRIMARY SOURCE: Zhurnal Eksperimental'noy i Teoreticheskoy
Fiziki, 1970, Vol 58, Nr 1, pp 309-323

STIMULATED MANDELSTAM — BRILLOUIN AND STIMULATED
ENTROPY BACKSCATTERINGS OF LIGHT PULSES


V. I. Bespalov, G. A. Pasmanik

A theory of stimulated Mandelstam — Brillouin and entropy backscatterings of light is developed in the prescribed pumping field approximation by taking into account fluctuation processes in the medium. The intensity and spectral distribution of light scattered by laser pulses whose duration is either greater or smaller than the time of traversal of the scattering volume by light are determined. Accumulative effects arising on scattering of a set of ultrashort pulses are discussed. In particular narrowing of the scattered light spectrum with growth of number of the exciting pulse is considered.

REEL/FRAME
19731095

11

013

1/2 038 UNCLASSIFIED PROCESSING DATE--23OCT70
TITLE--STIMULATED SCATTERING OF ULTPASHORT LIGHT PULSES -U-
AUTHOR-(02)-BESPALOV, V.I., PASMANIK, G.A. 
COUNTRY OF INFO--USSR
SOURCE--IZV. VYSSH. UCHEB. ZAVED., RADIOFIZ. 1970, 13(1), 148-50
DATE PUBLISHED-----70

SUBJECT AREAS--PHYSICS
TOPIC TAGS--LIGHT SCATTERING, SIMULATION, UV LASER, LASER PULSE

CONTROL MARKING--NO RESTRICTIONS
DOCUMENT CLASS--UNCLASSIFIED
PROXY REEL/FRAE--1987/0166 STEP NO--UR/0141/70/013/001/0148/0150
CIRC ACCESSION NO--AT0103845
UNCLASSIFIED

2/2 038

UNCLASSIFIED

PROCESSING DATE--23OCT70

CIRC ACCESSION NO--AT0103845

ABSTRACT/EXTRACT--(U) GP-O- ABSTRACT. A THEORETICAL DISCUSSION IS GIVEN OF THE EFFECTS AND PECULIARITIES OF STIMULATED SCATTERING (TEMP. SCATTERING DETD. BY ONE PHOTON LIGHT ABSORPTION AND MANDELSTAM BRILLOUIN SCATTERING) OF ULTRASHORT LASER PULSES. FACILITY: NAUCH.-ISSLED. RADIOFIZ. INST., GOR'K. UNIV., GORKI, USSR.

UNCLASSIFIED

USSR

UDC: 621.317.726


BESPALOV, V. K., BORISENKO, N. A., GUBAR', V. I.

"Wide-Band Converters of Effective Values"

Dokl. Vses. nauchno-tekhn. konferentsii po radiotekhn. izmereniyam. T. 3 (Reports of the All-Union Scientific and Technical Conference on Radio Engineering Measurements. Vol. 3), Novosibirsk, 1970, pp 77-79 (from RZh-Radiotekhnika, No 1, Jan 71, Abstract No 1A308)

Translation: The authors discuss problems of using thermoconverters for constructing effective-value voltmeters, increasing their speed, converter errors, etc. In addition, consideration is given to the use of other converters for the same purposes, e. g. with metallic heated resistors or with an electrostatic voltmeter. It is pointed out that a voltmeter is presently being developed on the basis of differentially connected thermoconverters. Brief technical characteristics are given. Bibliography of five titles. E. L.

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1/2 018 UNCLASSIFIED PROCESSING DATE--30OCT70
TITLE--DEGREE OF LIGHT ABSORPTION IN POTASSIUM DIHYDROGEN PHOSPHATE SINGLE
CRYSTALS -U-
AUTHOR-(03)-AVERBAKH, V.S., BATYREVA, I.A., BESPALOV, V.O. 
COUNTRY OF INFO--USSR
SOURCE--IZV. VYSSH. UCHEB. ZAVED., RADIOFIZ. 1970, 13(2), 307-9
DATE PUBLISHED-----70

SUBJECT AREAS--CHEMISTRY, PHYSICS

TOPIC TAGS--PHOSPHATE, SINGLE CRYSTAL, HYDROGEN COMPOUND, ABSORPTION
COEFFICIENT

CONTROL MARKING--NO RESTRICTIONS

DOCUMENT CLASS--UNCLASSIFIED

PROXY REEL/FRAME--2000/1559

STEP NO--UR/0141/70/013/002/0307/0309

CIRC ACCESSION NO--AP0125185

UNCLASSIFIED

2/2 018

UNCLASSIFIED

PROCESSING DATE--30OCT70

CIRC ACCESSION NO--AP0125185

ABSTRACT/EXTRACT--(U) CP-0- ABSTRACT. SPECTRAL CURVES WERE DETD. OF THE
ABSORPTION COEFFS. OF K DIHYDROGEN PHOSPHATE SINGLE CRYSTALS IN THE
WAVELENGTH RANGE 0.6-1.4 MU FOR THE ORDINARY AND THE EXTRAORDINARY RAYS.
THE RELATIVE DISPERSION OF THE ABSORPTION COEFF. FOR THE ORDINARY WAVE
WAS LOW. FACILITY: NAUCH.-ISSLED. RADIOFIZ. INST., GOR'K.
UNIV., GORKI, USSR.

UNCLASSIFIED

Receivers and Transmitters

USSR

UDC 621.391.8

BESPALOV, YE. S., KULESHOV, V. N.

"Optimal Phase AFC System for Filtering FM Signals in Internal Noise"

Kiev, Izvestiya VUZ-Radioelektronika, Vol 13, No 11, 1970,
pp 1344-1348

Abstract: This paper shows how the optimal filter for a phase AFC circuit detecting FM signals in noise with limited dispersion can be obtained by using the theory of optimal linear filtration, with the instability of the local oscillator taken into account. Considering a linear model of the phase AFC system, the authors assume it acted upon by three additive random processes: the phase deviation of a standard signal; the external of "phase" noise; the internal noise or the disturbance caused by the instability of the local oscillator frequency. They assume also that the external noise has an energy spectral density which is constant in the FM signal band, and that the phase modulation is realized by a telegraph signal. The local
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USSR

BESPALOV, YE. S., et al, Izvestiya VUZ-Radioelektronika, Vol 13,
No 11, 1970, pp 1344-1348

oscillator disturbance is assumed to be the result of shot noise. A curve is plotted for the relative mean-square error of the optimal phase AFC system which indicates that the fluctuating internal disturbance's contribution to the total error in the signal filtration is large only when the spectral intensity of the disturbance is equal to or exceeds the external noise intensity at a particular frequency.

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USSR

UDC 621.397.332

B
BESPALOV, YE.S., KAPELINSKIY, I.YU., SOLOV'YEV, A.N.

"Optimization of Television Automatic Controls"

Dokl. Nauchno-tekhn. konferentsii po itogam nauchno-issled. rabot za 1968-1969 gg. Mosk. energ. in-t, 1970. Sekts. radiotekhn. Podseks. televid. (Reports of the Scientific-Engineering Conference on Advances in Scientific-Research Studies in 1968-1969. Moscow Energetics Institute, 1970. Section on Radio Engineering. Subsection on Television), Moscow, 1969, pp 85-96 (from RZh-Radio-tehnika, No 2, Feb 70, Abstract No 2D108)

Translation: A system for automatic horizontal correction of a TV raster subject to simultaneous action of signal and noise is considered. The optimization criterion is a minimum of the random error for given memory time and given dynamic accuracy. The class of linear stationary systems is taken as the class of acceptable systems. Two processing techniques are examined: phase detection and frequency detection. Seven illustrations. Five references.

Ye.T.

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USSR

UDC 617-001.28-092.9-07:616.127-091-3-076.4

MITYUSHIN, V. M., BESPALOVA, L. A., (Institutes of Biophysics, Ministry of Health
USSR, Moscow)

"Change in the Ultrastructure of Dog Myocardium at Different Periods After Total
Gamma-Ray Irradiation."

Moscow, Kardiologiya, Vol 10, No 6, Jun 70, pp 95-99

Abstract: The ultrastructure of myocardial cells of the left ventricle was studied in dogs at different stages of acute radiation sickness caused by whole-body gamma-ray irradiation in a dose of 350 r. Electron microscope investigation revealed a varying degree of sensitivity and susceptibility to injury of the myocardial intracellular structures; the most labile components were the mitochondria. Destructive changes in mitochondria were already noted during the first hours after gamma-ray irradiation. The most resistant components were myofibrils and muscle nuclei, which were damaged only in the late periods of the experiment.

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USSR

UDC: 539.121.7+621.38

BESPALOVA, N. S. and GURVICH, L. G.

"Modeling Atomic Liberation from Crystal Surface Layers on the Electronic Computer"

Moscow, Doklady Akademii Nauk SSSR, vol. 202, No 4, 1972, pp 804-806

Abstract: This paper is concerned with the liberation of primary atoms from the surface of a solid undergoing radiational sputtering in a field of nuclear activity, a process which leads to the erosion of the surface. Computation of the liberation process and of the shift in the atoms caused by such liberation can be done on the electronic computer. For the purpose of estimating the possibilities of using the computer for solving the problem of radiation erosion, this paper considers a model of a space-centered cubic lattice with a volume of $5 \times 5 \times 4 a^3$ containing 148 atoms. Modeling the liberation of an atom from the surface layers consists in solving the system of equations

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$$\begin{aligned} m \, dv_{\alpha i} / dt &= F_{\alpha i}(x_1, y_1, z_1, \dots, x_N, y_N, z_N), \\ \dot{\alpha}_i / dt &= v_{\alpha i}; \alpha = x, y, z; N = 1, 148. \end{aligned}$$

USSR

UDC: 539.121.7+621.38

BESPALOVA, N. S., et al, Doklady Akademii nauk SSSR, vol. 202,
No 4, 1972, pp 804-806

This system was solved on the BESM-2M computer by the method of finite differences. The stability of the model is estimated. The work was done at the Institute of Atomic Physics, Uzbek Academy of Sciences.

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Acc. Nr: **AP0043674**

Ref. Code: UR 0056

PRIMARY SOURCE: Zhurnal Eksperimental'noy i Teoreticheskoy
Fiziki, 1970, Vol 58, Nr 2, PP **568-572**

ON SYNCHRONIZATION OF CLOCKS IN THE GENERAL
RELATIVITY THEORY

L. Ya. Arijov, N. S. Bespalova

The possibility of a global description of space-time relations in the four-dimensional continuum of the theory of relativity is investigated. For this purpose a time function and space equation as hypersurfaces of simultaneous points are introduced.

REEL/FRA
19770078

2/ DI

Acoustical and Ultrasonic

USSR

UDC: 629.12:534.29

BESPALOVA, Ye. I., VOROTNIKOVA, M. I., KONONENKO, V. O.

"Diffraction of a Shock Wave in Water Against an Absolutely Rigid Nonmoving Cylinder"

Kiev, Prikladnaya Mekhanika, Vol 8, No 11, Nov 72, pp 3-8.

Abstract: The hydrodynamic pressure field around an infinitely long, absolutely rigid nonmoving cylinder in an acoustic medium is studied when the cylinder is struck by a shock wave with exponential pressure drop behind the leading edge. The solution, first found in the field of a Laplace transform, is sought in the space of the true variable by the method of numerical inversion using Legendre polynomials. The method is applicable for any time interval. Experimental recording of pressure at several points around metal cylinders qualitatively confirms the course of the process of loading of the cylinder with time.

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USSR

UDC 539.3

GRIGORENKO, YA. M., BESPALOVA, YE. I., LATSINNIK, I. F., (Kiev), Institute of Mechanics, Academy of Sciences, Ukrainian SSR

"Calculation of Plates of Variable Rigidity"

Kiev, Prikladnaya Mekhanika, Vol 7, No 9, Sep 71, pp 45-49

Abstract: The article approaches a solution to two-dimensional boundary-value problems of the curvature of rectangular plates with rigid characteristics, variable in two directions, with various combinations of hinged and rigid support of two opposing edges. The problem is solved by the method of integral relationship in the form of L. V. Kantorovich with the use of trigonometric functions. Solution of unidimensional problem is realized by means of a stable numerical method on an electronic digital computer. Examples are given of the calculation of specific problems which illustrate good convergence of the applied method. This approach may be used without any essential difficulties also when solving problems given with a stress-deformed state of open shells of variable rigidity in two directions. One figure, two tables, six references.

1/1

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1/2 012 UNCLASSIFIED PROCESSING DATE--11SEP70
TITLE--SYNTHESIS BASED ON 2,METHYL,4,QUINOLINECARBOXYLIC ACID -U-
AUTHOR--LIPKIN, A.YE., BESPALOVA, ZH.P.
COUNTRY OF INFO--USSR
SOURCE--KHIM. FARM. ZH. 1970, 4(1), 24-6
DATE PUBLISHED-----70

SUBJECT AREAS--BIOLOGICAL AND MEDICAL SCIENCES

TOPIC TAGS--CHEMICAL SYNTHESIS, QUINOLINE, AROMATIC CARBOXYLIC ACID,
CANCER DRUG, ESCHERICHIA COLI, SHIGELLA, AROMATIC NITRO COMPOUND

CONTROL MARKING--NO RESTRICTIONS

DOCUMENT CLASS--UNCLASSIFIED

PROXY REEL/FRA--1984/1708

STEP NO--UR/0450/70/004/001/0024/0026

CIRC ACCESSION NO--AP0100305

UNCLASSIFIED

2/2 012

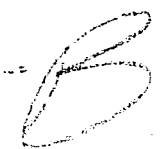
UNCLASSIFIED

PROCESSING DATE--11SEP70

CIRC ACCESSION NO--AP0100305

ABSTRACT/EXTRACT--(U) GP-0- ABSTRACT. A SERIES OF POTENTIAL ANTICARCINOGENS WAS PREPD. BY TREATING 0.01 MOLE 2-METHYL 4-QUINOLINECARBOXYLIC ACID (M. 243-5DEGREES) WITH 0.01 MOLE ALDEHYDE IN 10 ML AC SUB2 O, AND HEATING THE MIXT. 30 MIN AT 180-90DEGREES. THUS WERE PREPD. I (R AND M.P. GIVEN): PH (IA), 289-90DEGREES; O-NITROPHENYL (II), 293-4DEGREES; M-NITROPHENYL (III), 316-17DEGREES; P-NITROPHENYL (IV), 324-5DEGREES; 2-FURYL, 196-8DEGREES, 5-NITRO, 2-FURYL, 297-8DEGREES; 2-THIENYL, 292-3DEGREES; 5-NITRO, 2-THIENYL, 296DEGREES. WHEN TESTED AGAINST INTESTINAL MICROBES, II AND III WERE INACTIVE AND IV ONLY SLIGHTLY ACTIVE. IA WAS ACTIVE AGAINST CANDIDA ALBICANS, E(SCHERICHIA) COLI AND SH(IGELLA) SONNEI.

UNCLASSIFIED

1/2 009 UNCLASSIFIED PROCESSING DATE--11SEP70
TITLE--ON THE AGE OF ERMANOV ROCK SERIES OF EASTERN SHORE OF PENZHINA GULF
-U-
AUTHOR--BESPALYY, V.G., FAYNBERG, F.S., REMIZOVSKIY, R.I. 
COUNTRY OF INFO--USSR
SOURCE--GEOLOGIYA I GEOFIZIKA, 1970, NR 1 (121) P 123-129
DATE PUBLISHED-----70

SUBJECT AREAS--EARTH SCIENCES AND OCEANOGRAPHY
TOPIC TAGS--ABSOLUTE AGE, EARTH CRUST AGE, PALEOMAGNETISM, GEOCHRONOLOGY

CONTROL MARKING--NO RESTRICTIONS
DOCUMENT CLASS--UNCLASSIFIED
PROXY REFEL/FAME--1986/1284 STEP NO--UR/0210/70/000/001/0123/0129
CIRC ACCESSION NO--AP0103166
UNCLASSIFIED

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UNCLASSIFIED

PROCESSING DATE--11SEP70

CIRC ACCESSION NO--AP0103166

ABSTRACT/EXTRACT--(U) GP-0- ABSTRACT. THE RESULTS OF STUDY OF SECTION OF CONTINENTAL SEDIMENTS OF ERMANOV ROCK SERIES AND UNDERLYING SEA FORMATIONS OF ETALONSK ROCK SERIES ON THE SHORE OF REKINNIA GULF (KAMCHATKA) ARE DESCRIBED IN THE PAPER. THE AUTHORS ESTABLISH THE UPPER LIMIT OF SECTION AGE, ABOUT 3 MLN YEARS (MIDDLE PLIOCENE OR LOW PARTS OF UPPER PLIOCENE) BASED UPON THE COMPARISON OF MAGNETIC POLARITY OF ERMANOV SUITE ROCKS WITH PALEOMAGNETIC GEOCHRONOLOGICAL SCALE OF PLIOCENE PLEISTOCENE.

UNCLASSIFIED

1/2 013 UNCLASSIFIED PROCESSING DATE--16OCT70
TITLE--SERVICE OF CHROMIUM SPINEL FORSTERITE CERAMICS IN UPTAKES OF ROOFS
OF SLAG POCKETS AND REGENERATORS OF OPEN HEARTH FURNACES -U-
AUTHOR-(04)-UZBERG, A.I., BRON, V.A., VYDRINA, ZH.A., BESPAMYATNYKH, V.I.

COUNTRY OF INFO--USSR

SOURCE--OGNEUPORY 1970, 35(2), 23-31

DATE PUBLISHED-----70

SUBJECT AREAS--MATERIALS, MECH., IND., CIVIL AND MARINE ENGR

TOPIC TAGS--SPINEL, OPEN HEARTH FURNACE, CHROMIUM COMPOUND, CERAMIC
MATERIAL

CONTROL MARKING--NO RESTRICTIONS

DOCUMENT CLASS--UNCLASSIFIED

PROXY REEL/FRAME--1996/0890

STEP NO--UR/0131/70/035/002/0023/0031

CIRC ACCESSION NO--AP0118059

UNCLASSIFIED

2/2 013 UNCLASSIFIED PROCESSING DATE--16OCT70
CIRC ACCESSION NO--AP0118059
ABSTRACT/EXTRACT--(U) GP-0- ABSTRACT. CR SPINEL FORSTERITE (I) CERAMICS
WERE FOUND ON EVALUATION TO BE SUITABLE AS REPLACEMENT FOR MAGNESITE
CHROMITE (II) LININGS. THE USE OF I WAS EXPECTED TO ECONOMIZE THE
PROCESS. THE POSSIBLE CRYSTALLOGRAPHIC AND CHEM. CHANGES OCCURRING
DURING SERVICE (REVERSIBLE REDN. OF FE SUB2 O SUB3, RECRYSTN. OF
FORSTERITE, CHROMITE, AND SILICATE PHASE) IS DISCUSSED.
FACILITY: VOST. INST. OGNEUPOR, SVERDLOVSK, USSR.

UNCLASSIFIED

Construction

USSR

UDC 539.4:624.012

ZHUNUSOV, T. Zh., BESPAYEV, A. A.

"Influence of Prestressing of Reinforced Concrete Columns on Earthquake Resistance of Multistory Rod Frames"

Seysmostoikost' Predvaritel'no Napryazhen. Zhelezobeton. Konstruktsiy [Earthquake Resistance of Prestressed Reinforced Concrete Structures -- Collection of Works], Moscow, 1972, pp 268-275, (Translated from Referativnyy Zhurnal, Mekhanika, No 11, 1972, Abstract No 11 V954, from the Resume).

Translation: The results of studies of the prestressed state of two-span three-level frames measuring 3.5×4 m with reinforced concrete columns and metal beams are presented. The influence of varying degrees of prestressing of columns on strength, rigidity and distribution of forces in the system under short-term static and dynamic loading with a horizontal load was studied. The expediency of static design of reinforced concrete frames considering the variable rigidity of the elements is estimated. Information is presented on the attenuation of free oscillations of frames with various levels of external action.

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Petroleum Processing Technology

USSR

UDC 662.749.75:543.872

BUSHUYEVA, Ye. M., and BESPOLOV, I. Ye., All Union Scientific Research Institute of Petroleum Products

"Effect of the Hydrocarbon Composition of Jet Fuels on Their Thermal Stability"

Moscow, Khimiya i Tekhnologiya Topliv i Masel, No 9, 1971, pp 46-49

Abstract: A source of sediment formation during oxidation of jet fuels, beside that of nonhydrocarbon compounds, consists of aromatic hydrocarbons, especially of the derivatives of naphthalene and polycyclic naphthenes; in comparison, alkyl derivatives of benzene form sediments to a much lesser degree. Paraffins and naphthenes found in jet fuels form no sediments. The structure of the non-aromatic components has a definite effect on the degree of coagulation of the oxidation products of aromatic hydrocarbons and hence on the quantity of sediment formed. Maximum quantity of a solid phase forms during oxidation of mixtures of aromatic and branched aliphatic hydrocarbons; minimal levels are formed during oxidation of their mixtures with bicyclic hydrocarbons (such as decaline). The quantity of solid phase formed is increased as the length of the side chain in the cyclic hydrocarbons in the mixture is increased. Thus,

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USSR

BUSHUYEVA, Ye. M. and BESPOLOV, I. Ye., Khimiya i Tekhnologiya Topliv i Masel, No 9, 1971, pp 46-49

hydrocarbon fuels show high thermal stability when they contain no polycyclic naphthenes or aromatic hydrocarbons. In cases when the fuel mixture contains at least 30-40% of bicyclic hydrocarbons, limited amounts of monocyclic aromatic hydrocarbons may be tolerated -- up to 10-15%.

2/2

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USSR

UDC: 533.69.01+533.662.013

BESPROZVANIYA, A. A.

"Experimental Investigation of the Hydrodynamic Characteristics of a Wing in a Two-Phase Flow"

Tr. Leningr. korablestroit. in-ta (Works of the Leningrad Shipbuilding Institute), 1971, vyp. 74, pp 25-30 (from RZh-Mekhanika, No 7, Jul 72, Abstract No 7B325)

Translation: The paper presents the results of tests of a series of wings in a cavitation tube under conditions of a two-phase flow which was formed by saturation of a fluid at Reynolds numbers of $(0.8-1.5) \cdot 10^6$ and angles of attack of $\pm 16^\circ$. The test data are used to determine the hydrodynamic characteristics of the wings at low numbers M_∞ when the influence of compressibility is insignificant, and at high numbers M_∞ . Conditions are established which correspond to an abrupt transition and to detached flow with a well developed cavity; an investigation is made into the effect of a two-phase flow on the hydrodynamic characteristics of a hydrofoil located close to the interface between a two-phase and a single-phase flow. It is shown that an abrupt change in the hydrodynamic characteristics of wings

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USSR

BESPROZVANIYA, A. A., Tr. Leningr. korablestroit. in-ta, 1971, vyp. 74,
pp 25-30

is theoretically possible both in the case where the wings are located
directly in a two-phase flow, and when they are some distance away from
such a flow. B. I. Bakum.

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Acc. Nr:

AP0049792

Abstracting Service:

CHEMICAL ABST. 5-70

Ref. Code:

4R 0183

101747r Modification of poly(vinyl chloride) fibers by alkylchlorosilanes. Vol't, L. A.; Besprozvannykh, A.; Podlesskaya, N. K.; Klimenko, I. B.; Shchukunov, N. G.; Grachev, V. T. (USSR). *Khim. Volokna* 1970. (1), 76-7 (Russ). Poly(vinyl chloride) (I) fibers were given water repellency by dehydrochlorination in the presence of FeCl_3 or diazoaminobenzene (II) catalyst followed by treating with Me_3SiCl (III), Me_2SiCl_2 (IV), or MeSiCl_3 (V) to give modified I having increasing Si content with increasing double bond content and amt. of Cl in the silanes. I fibers were dehydrochlorinated in the free state with 6% II and alc. by heating 18-20 hr at 90-100° or in the fixed state at 130° for 10-18 hr with II or 0.5-1 hr with 20% FeCl_3 soln. After removing from the catalyst bath (with bath ratio 40) and drying to 3-7% catalyst add-on, the fibers were impregnated with the silanes, e.g. with a bath contg. 2-10% V (bath ratio 30) for 10-15 min at 20°; heated in air 2-5 hr at 90-130°; extd. for 1 day with benzene, and washed 5 times with H_2O or 1.5 times with steam to give I with 0.2-2% Si. Si content increased with increasing silane concn. in the bath, temp., and length of treatment. Although V gave the highest Si content, V gave the best water repellency as detd. by contact angle measurements. Si addn. to I was by Si-O-C bonds as well as by Si-C bonds. BCJR

REEL/FRAME

19801714

1/3 024 UNCLASSIFIED PROCESSING DATE--02JCT70
TITLE--CYCLIC VARIATIONS OF THE A SURD AND N PARAMETERS IN THE LATITUDE
DEPENDENCE OF MIDDAY F2 LAYER IONIZATION, MIDDAY IONIZATION OF THE F2
AUTHOR--(02)--DESPROZVANNAYA, A.S., YUDOVICH, L.A.

COUNTRY OF INFO--USSR *B*

SOURCE--ARCTIC AND ANTARTIC SCIENTIFIC RESEARCH INSTITUTE AND INSTITUTE OF
TERRESTRIAL MAGNETISM, IONOSPHERE AND RADIO WAVE PROPAGATION; MOSCOW,
DATE PUBLISHED-----70

SUBJECT AREAS--ATMOSPHERIC SCIENCES, ASTRONOMY, ASTROPHYSICS

TOPIC TAGS--F LAYER, IONIZATION, VERTICAL SOUNDING, SOLAR ACTIVITY

CONTROL MARKING--NO RESTRICTIONS

DOCUMENT CLASS--UNCLASSIFIED

PROXY REFEL/FRAME--1990/1664

STEP NO--UR/0203/70/010/002/0336/0338

CIRC ACCESSION NO--AP0109657

UNCLASSIFIED

2/3 024

UNCLASSIFIED

PROCESSING DATE--02OCT70

CIRC ACCESSION NO--AP0109657

ABSTRACT/EXTRACT--(U) GP-C- ABSTRACT. THE ANALYTICAL FORMULA FOR DESCRIBING THE GEOGRAPHIC DISTRIBUTION OF MIDDAY IONIZATION OF THE F2 LAYER IS (SHOWN ON MICROFICHE) WHERE M SUBIK IS EQUAL TO THE RATIO OF THE FOURTH POWER OF THE COSINES OF SOLAR ZENITH ANGLE AT THE ENDS OF THE MAGNETIC LINE OF FORCE PASSING THROUGH A PARTICULAR POINT WITH COORDINATES I (IN LATITUDE) AND K (IN LONGITUDE). THE PARAMETERS A SUB O AND N ARE FOUND EMPIRICALLY. DATA FROM THE WORLD NETWORK OF VERTICAL SOUNDING STATIONS IN THE NORTHERN HEMISPHERE WERE USED IN COMPUTING THE A SUB O AND N PARAMETERS FOR 1958-1964. THE ANALYSIS REVEALED THAT THERE ARE SUBSTANTIAL CYCLIC CHANGES IN THE A O AND N PARAMETERS WITH A LATITUDE DEPENDENCE OF MIDDAY IONIZATION OF THE F 2 LAYER. THE RADIO EMISSION FLUX AT LAMBDA EQUALS 10.7 CM CORRELATES BETTER WITH PHOTOIONIZING RADIATION THAN WITH SPOT NUMBER. LINEARITY OF THE DEPENDENCE IS NOT IMPAIRED EVEN DURING THE PERIOD OF HIGH SOLAR ACTIVITY. COMPARISON OF DATA FOR 1958 AND 1964 REVEALED THAT IN RELATIVE UNITS THE AMPLITUDE OF THE ANNUAL VARIATION REMAINS CONSTANT WITH TRANSITION FROM YEARS OF MAXIMUM TO MINIMUM ACTIVITY, ALTHOUGH IN ABSOLUTE VALUE IT DECREASED BY HALF DURING THIS PERIOD. THE EXPONENT N IN THE FORMULA IS FOR THE COSINE OF SOLAR ZENITH ANGLE. THE NATURE OF ITS CHANGES DURING THE CYCLE IS DIFFERENT FOR DIFFERENT SEASONS. DURING MARCH AND DECEMBER N INCREASES WITH A DECREASE IN SOLAR ACTIVITY WHEREAS IN JUNE AND SEPTEMBER IT DECREASES. IN YEARS OF MAXIMUM SOLAR ACTIVITY THERE ARE LOW N VALUES DURING WINTER AND A MARKED INCREASE IN N WITH AN INCREASE IN SOLAR DECLINATION FOR BOTH HEMISPHERES. IN WINTER THE N VALUES IN YEARS.

UNCLASSIFIED

373. 024

UNCLASSIFIED

PROCESSING DATE--02OCT70

CIRC- ACCESSION N)--AP0109657

ABSTRACT/EXTRACT--OF THE MINIMUM ARE GREATER THAN DURING YEARS OF THE
MAXIMUM. THE REVERSE IS TRUE FOR SUMMER.

UNCLASSIFIED

89

Acc. Nr.: AP0042365

Ref. Code: UR0203

JPRS 50162

Equatorial Anomaly of Midday Ionization of F2 Layer

(Abstract: "Characteristics of the Equatorial Anomaly of Midday Ionization of the F2 Layer During the Winter and Summer Solstices," by A. S. Besprozvannaya, Arctic and Antarctic Scientific Research Institute; Moscow, Geomagnetizm i Aeronomiya, Vol X, No 1, 1970, pp 56-58)

Most studies of the equatorial anomaly of the F2 layer have been made for the equinoctial period. In this study the equatorial anomaly was investigated on the basis of data for 11 stations in the Asiatic zone and 10 stations in the American zone. The midday critical frequencies were determined for four winter and summer months of 1958 and the difference between the observed and computed f_0F_2 values was determined as an average for the corresponding season. It was found that there is a distinct difference in the equatorial anomaly for the Asiatic and American zones. In the Asiatic zone the position of the minimum (or "equator" of the F2 layer) remains virtually unchanged from season to season. In summer and winter the F2-layer equator almost coincides with the magnetic equator, being situated 1-2° to the north of it. In the American zone the position of the minimum changes considerably with season. During the summer months the F2-layer equator, as in the Asiatic zone, almost coincides with the

Reel/Frame
19760313

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AP0042365

magnetic equator. However, during the winter months the F2-layer equator is displaced 8-10° to the north. The asymmetry of the equatorial anomaly and displacement of the center of the minimum in the American zone can be an indication that in this region there is an intensification of horizontal pressure gradients. The fact that there is a seasonal difference in the nature of the asymmetry indicates a change in the direction of the horizontal wind. In both the American and Asiatic zones the depth of the anomaly is less in summer than in winter. This results in a seasonal change in the sign of the longitude effect of the F2-layer equator.

19760314

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1/2 007 UNCLASSIFIED PROCESSING DATE--02OCT70
TITLE--REACTION OF ARYLDIAZONIUM SALTS WITH UNSUBSTITUTED AMIDES AND
THIOAMIDES OF CARBOXYLIC ACIDS -U-
AUTHOR--(03)-NESYNOV, YE.P., BESPROZVANNAYA, M.M., PELKIS, P.S.

COUNTRY OF INFO--USSR

SOURCE--ZH. ORG. KHIM. 1970, 6(3) 540-4 *B*

DATE PUBLISHED-----70

SUBJECT AREAS--CHEMISTRY

TOPIC TAGS--DIAZONIUM SALT, CARBOXYLIC ACID, AMIDE, ORGANIC SULFUR
COMPOUND, MOLECULAR STRUCTURE

CONTROL MARKING--NO RESTRICTIONS

DOCUMENT CLASS--UNCLASSIFIED

PROXY FILE/FRAME--1991/2572

STEP NO--UR/0366/70/006/003/0540/0544

CIRC ACCESSION NO--AP0112566

UNCLASSIFIED

2/2 007

UNCLASSIFIED

PROCESSING DATE--02OCT70

CIRC ACCESSION NO--AP0112566

ABSTRACT/EXTRACT--(U) GP-0* ABSTRACT. THE REACTION OF SC SUB6 H SUB4 N SUB2 CL (X EQUALS H, O-CL, P-CL, M-ME, M-ME SUB2, P-ED, P-ED SUB2 II, OR P-B) WITH PHNHC(:S)NH SUB2 (I) IN NaOH SOLN. GAVE 9-50PERCENT PHN:C(NH SUB2)SC SUB6 H SUB4 X (II) AND ALSO THE CORRESPONDING PHN:C(SC SUB6 H SUB4 X)NH:NC SUB6 H SUB4 X (III). THE REACTION OF II WITH XC SUB6 H SUB4 N SUB2 CL ALSO GAVE III. THE REACTION MUST INVOLVE PHNHC(SNA):NH AS THE INTERMEDIATE SINCE IN ACIDIC SOLN. I ARE NOT FORMED. SIMILARLY, IN AQ. NaOH SOLN. RCONH SUB2 EXIST AS RC(ON):NH WHICH REACT WITH XC SUB6 H SUB4 N SUB2 CL GIVING RC(OC SUB6 H SUB4 X):NN:NC SUB6 H SUB4 X (R AND X GIVEN): ME, P-CL; PH, H; PH, O-CL. ALSO PHNHNHC(:S)NHCH SUB2 CH:CH SUB2 PLUS NaOH IN EQUILIBRIUM PHNHN:C(SNA)NHCH SUB2 CH:CH SUB2 (IV). THE REACTION OF IV WITH PHV SUB2 OAC GAVE A MIXT. OF PHNHN:C(SPH)-NHCH SUB2 CH:CH SUB2 AND PHN(N:NPH)N:C(SPH)NHCH SUB2 CH:CH SUB2, (V) (THE STRUCTURE PHNHN:C(SPH)N(N:NPH)CH SUB2 CH:CH SUB2 IS NOT EXCLUDED FOR V).

UNCLASSIFIED

1/2 009 UNCLASSIFIED PROCESSING DATE--30OCT70
TITLE--REACTION OF ARYLDIAZONIUM SALTS WITH ACETOTHIOACETIC ACID
ARYLAMIDES -U-
AUTHOR--(03)-NESYNOV, YE.P., BESPROZVANNAYA, M.M., PELKIS, P.S.
COUNTRY OF INFO--USSR
SOURCE--ZH. ORG. KHIM. 1970, 6(4), 805-9
DATE PUBLISHED-----70
SUBJECT AREAS--CHEMISTRY
TOPIC TAGS--AMIDE, ORGANIC SALT, ACETIC ACID, THIOL, CONDENSATION
REACTION, ORGANIC AZOLE COMPOUND, HYDROLYSIS
CONTROL MARKING--NO RESTRICTIONS
DOCUMENT CLASS--UNCLASSIFIED
PROXY REEL/FRA--2000/2156 STEP NO--UR/0366/70/006/004/0805/0809
CIRC ACCESSION NO--AP0125739
UNCLASSIFIED

2/2 009

UNCLASSIFIED

PROCESSING DATE--30OCT70

CIRC ACCESSION NO--AP0125739

ABSTRACT/EXTRACT--(U) GP-0- ABSTRACT. THE CONDENSATION OF MECOCH SUB2 C(S)NHPH WITH XC SUB6 H SUB4 N SUB2 CL IN AQ. ACETONE SOLN. CONTG. ACONA GAVE MECOC(:NNHC SUB6 H SUB4 X)C(S)NHPH (I). THE REACTION OF I WITH X PRIME1 C SUB6 H SUB4 N SUB2 CL IN ALK. SOLN. GAVE MECOC(:NNHC SUB6 H SUB4 X)C(:NPH)SC SUB6 H SUB4 X PRIME1 (II). THE HYDROLYSIS OF I GAVE X PRIME1 C SUB6 H SUB4 SH. THE REACTIONS OF II WITH H SUB2 NNH SUB2.H SUB2 G GIVE MECOC(CONHPH):NNHC SUB6 H SUB4 X, 3,METHYL,4,ARYLHYDRAZONO,5,ANILINOPYRAZOLE, AND MEC(:NNH SUB2) C(:NNHC SUB6 H SUB4 X)C(:NPH)NHNH SUB2 (III). THE REACTION OF BZCL WITH III GAVE MEC(:NNHBZ)C(:NNHC SUB6 H SUB4 X) C(:NPH)NHNHBZ. FACILITY: INST. ORG. KHIM., KIEV, USSR.

UNCLASSIFIED

USSR

UDC 632.95

PROTOPOPOVA, G. V., NESTERENKO, N. I., NESYNOV, Ye. P., BESPROZVANNAYA, M. M.,
and PEK'KIS, P. S.

"Insecticide Activity of Some Arylhydrazones and Aryl Esters E of Iminothio-
acids for Rice Weevils and for Grain and Chard Aphids"

Fiziol. aktivn. veshchestva. Resp. mezhved. sb. (Physiological Effects of
Compounds, Republic Interscience Symposium), Vyp 4, 1972, pp 68-71 (from
Referativnyy Zhurnal -- Khimiya, No 4(II), 1973, Abstract No 4N613 by T. A.
Belyayeva)

Abstract: Insecticidal properties of the compounds $\text{PhN}=\text{C}(\text{CN})\text{SC}_6\text{H}_4\text{R}$ (compound
I), $\text{PhN}=\text{C}(\text{NHPh})\text{SC}_6\text{H}_4\text{R}$ (compound II), $(\text{EtOOC})_2\text{C}=\text{NNHC}_6\text{H}_4\text{R}$ (compound III), and
the 2-arylthiobenzazols were determined. The highest insecticidal activity
for the rice weevils was shown by I (R = p-Me), 67% mortality for a 1% con-
centration; I (R = p-Br), 94% mortality; II (R = m-Cl), 100% mortality;
2-parachlorophenylthiobenzothiazole, 95% mortality for a 0.1% concentration;
and III (R = o-OMe), 100% mortality. It should be noted that for the
stereoisomers, the insecticidal properties are stronger for the β -form
than the α -form.

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1/2 022 UNCLASSIFIED PROCESSING DATE--27NOV70
TITLE--ON CHANGES OF THE THROMBOCYTARY FORMULA IN PATIENTS WITH MALIGNANT
NEOPLASMS -U-
AUTHOR--BESPROZVANNYKH, L.I. *B*
COUNTRY OF INFO--USSR
SOURCE--VOYENNO-MEDITSINSKIY ZHURNAL, 1970, NR 3 P 124
DATE PUBLISHED-----70

SUBJECT AREAS--BIOLOGICAL AND MEDICAL SCIENCES
TOPIC TAGS--THROMBOCYTE, CANCER, NEOPLASM, BONE MARROW, HEMOGLOBIN,
ERYTHROCYTE, LEUKOCYTE, SEDIMENTATION, STOMACH, SARCOMA, REPRODUCTIVE
SYSTEM, SURGERY, CHEMOTHERAPY, RADIOTHERAPY

CONTROL MARKING--NO RESTRICTIONS
DOCUMENT CLASS--UNCLASSIFIED
PROXY REEL/FRA--3007/0423 STEP NO--UR/0177/70/000/003/0124/0124
CIRC ACCESSION NO--AP0135892
UNCLASSIFIED

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022

UNCLASSIFIED

PROCESSING DATE--27NOV70

CIRC ACCESSION NO--AP0135892

ABSTRACT/EXTRACT--(U) GP-0- ABSTRACT. MANY INVESTIGATORS SAY THAT CHARACTERISTIC CHANGES OF THE THROMBOCYTES IN MALIGNANT NEOPLASMA ARE DEGENERATION OF THE MEGAKARYOCYTES OF THE BONE MARROW, INCREASE IN THE CONTENT OF "OLD" FORMS OF THROMBOCYTES IN THE BLOOD, AND WELL EXPRESSED ABSOLUTE AND RELATIVE THROMBOCYTOSIS. WE HAVE STUDIED THE THROMBOCYTARY FORMULA IN 20 MEN WITH MALIGNANT TUMORS AVRIDOUSLY LOCATED, IN 46 WITH NONMALIGNANT DISEASES AND IN 40 PRACTICALLY HEALTHY MEN. THE HEMOGLOBIN, ERYTHROCYTES, LEUCOCYTES AND ERYTHROCYTE SEDIMENTATION REACTION WERE DETERMINED SIMULTANEOUSLY. OF THE 20 MEN WITH MALIGNANT NEOPLASMS FOUR HAD CONCR OF THE STOMACH, FOUR HAD SARCOMA VARIOUSLY LOCATED, 4 HAD CANCER OF THE GENITOURINARY ORGANS, 3 OF THE RECTUM, 3 OF THE MAMMARY GLAND, AND 2 CANCER OF THE LUNGS. OF THEM 11 HAD UNDERGONE RADICAL OPERATION, SIX PALLIATIVE, AND THREE HAD RECEIVED MEDICAL THERAPY AND RADIATION THERAPY.

UNCLASSIFIED

Coatings

USSR

UDC 621.763

FRANTSEVICH, I. N., KARPINOS, D. M., BESPATYY, V. A., BESPATYY, A. A., and REPECHENKO, G. A., Institute of Problems of Material Sciences, Academy of Sciences Ukrainian SSR; Zaporozh'ye "Kommunar" Automobile Plant

"Barrier Coating on Tungsten Fibers for Reinforced Nickel-Base Compositions"

Kiev, Poroshkovaya Metallurgiya, No. 10, Oct 70, pp 38-43

Abstract: The potentials of metal-base reinforced compositions appear to be limited due to the problem of stability of this class of materials, particularly by the stability of the interphase boundary of the composition at high temperatures. This study concerns a new technology of applying an antidiffusion coating to tungsten fibers as well as its reinforcing properties in a nickel-base composition. The experiment involved a WAl_{12} compound applied by spraying in vacuum to tungsten fibers. The compound was

USSR

FRANTSEVICH, I. N., et al., Poroshkovaya Metallurgiya, No 10, Oct 70, pp 38-43

found to provide a stable interphase boundary in a nickel-base composition at 1200° C for a minimum of 100 hours and at 1100° C for a minimum of 300 hours. The findings were confirmed by microstructural x-ray spectral analysis of the interphase boundary in a WAl_{12} coating applied in 0.01-mm layers. Use was made of an MAR-1 microanalyzer to study the tungsten distribution in the composition along the interphase boundary after various durations of heat treatment.

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- 4 -

USSR

UDC 621.762.4.044.2

KARPINCS, D. M., BESPYATYY, V. A., SUKHIKH, L. L., SHIYANOVSKAYA, I. YE.,
and BESPYATYY, A. A., Institute of Problems of Material Sciences, Academy
of Sciences UkrSSR, Zaporozh'ye Aluminum Plant "Kommunar"

"Some Properties of Reinforced Cylindrical Shells"

Kiev, Poroshkovaya Metallurgiya, No 11(131), Nov 73, pp 31-35

Abstract: The described technological schema of the formation of cylindrical shells includes the explosive squeezing with subsequent heat treatment (heating up to 850° C and 50 min aging) of a composite consisting of a plastic matrix in the form of a foil on a nickel base and reinforcing tungsten fibers, 0.03 mm in diam., in the form of a grid. The results of an investigation of the high-temperature short-duration strength of the shells show that the short-duration strength of the composite at 800, 950, and 1100° C considerably exceeds the strength of the matrix. At 950° C the strengthening effect of the composite reaches 6, at 1100° C it reaches 12, with a simultaneous decrease in plasticity properties. After heat treatment the composites reveal thermal stresses which develop from the difference in the linear elongation and the elastic constants of the components of the composite.

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Coatings

USSR

UDC 621.763

FRANTSEVICH, I. N., KARPINOS, D. M., BESPATYY, V. A., BESPATYY, A. A., and REPECHENKO, G. A., Institute of Problems of Material Sciences, Academy of Sciences Ukrainian SSR; Zaporozh'ye "Kommunar" Automobile Plant

"Barrier Coating on Tungsten Fibers for Reinforced Nickel-Base Compositions"

Kiev, Poroshkovaya Metallurgiya, No. 10, Oct 70, pp 38-43

Abstract: The potentials of metal-base reinforced compositions appear to be limited due to the problem of stability of this class of materials, particularly by the stability of the interphase boundary of the composition at high temperatures. This study concerns a new technology of applying an antidiffusion coating to tungsten fibers as well as its reinforcing properties in a nickel-base composition. The experiment involved a WAl_{12} compound applied by spraying in vacuum to tungsten fibers. The compound was

USSR

FRANTSEVICH, I. N., et al., Poroshkovaya Metallurgiya, No 10, Oct 70, pp 38-43

found to provide a stable interphase boundary in a nickel-base composition at 1200° C for a minimum of 100 hours and at 1100° C for a minimum of 300 hours. The findings were confirmed by microstructural x-ray spectral analysis of the interphase boundary in a WAl_{12} coating applied in 0.01-mm layers. Use was made of an MAR-1 microanalyzer to study the tungsten distribution in the composition along the interphase boundary after various durations of heat treatment.

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USSR

UDC 621.763

KARPINOS, D. M., and BESPIATY, V. A., Institute of Problems of Material Science, Academy of Sciences USSR

"Studies of the Disintegration of the Reinforcement Composition on a Nickel Base"

Poroshkovaya Metallurgiya, No 4(100), Apr. 71, pp 69-73

Abstract: Inspection of samples of composites of nickel reinforced by tungsten fibers showed that internal disintegration occurred upon loading which was not caused by macroscopic deformation. A study was made to determine the process of disintegration in an early state, pointing up the factors affecting the kinetics of this process, and to determine the degree of damage to the reinforced composite under elastic load. Samples with different amounts of reinforcing fibers and a nickel matrix alloyed with tungsten or chromium were tested under a constant linear load at room and elevated temperatures.

Under load in the elastic region, the reinforced composite shows a breakdown of the fibers. The stability of the reinforced composite essentially is affected by the uniformity of distribution of the wires in the matrix cross section. Irregular distribution increases the number of points of dis-

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USSR

KARPINOS, D. M., and BESPIATYY, V. A., et al. Poroshlovaya Metallurgiya, No 4(100), Apr 71, pp 69-73

integration in the elastic region of load. Increased temperatures increase the lengthwise transfer of the load from the matrix to the fibers and decrease the number of broken wires.

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1/2 050 UNCLASSIFIED PROCESSING DATE--13NOV70
TITLE--MEASUREMENT OF THE ELECTRON TEMPERATURE IN A BEAM PLASMA DISCHARGE
LASER ON THE BASIS OF THE BREMSSTRAHLUNG X RADIATION SPECTRUM -U-
AUTHOR--(05)-GADETSKIY, M.P., BOLOTIN, L.I., TKACH, YU.V., BESSARAB,
YA.YA., MAGDA, I.I.
COUNTRY OF INFO--USSR

SOURCE--UKRAINS'KII FIZICHN II ZHURNAL, VOL. 15, APR. 1970, P 662-664

DATE PUBLISHED----APR70

SUBJECT AREAS--PHYSICS

TOPIC TAGS--MEASUREMENT, ELECTRON TEMPERATURE, LASER, BREMSSTRAHLUNG, X
RADIATION, PLASMA DISCHARGE, PLASMA BEAM, POPULATION INVERSION,
RADIATION SPECTRUM

CONTROL MARKING--NO RESTRICTIONS

DOCUMENT CLASS--UNCLASSIFIED

PROXY REEL/FRAME--3002/0658

STEP NO--UR/0185/70/015/000/0662/0664

CIRC ACCESSION NO--AP0128195

UNCLASSIFIED

2/2 050

UNCLASSIFIED

PROCESSING DATE--13NOV70

CIRC ACCESSION NO--AP0128195

ABSTRACT/EXTRACT--(U) GP-0- ABSTRACT. INVESTIGATION OF THE PARAMETERS OF A HIGH ENERGY GROUP OF PLASMA ELECTRONS IN A LASER BASED ON A BEAM PLASMA DISCHARGE. THIS GROUP ARISES DUE TO THE ACCELERATION OF ELECTRONS BY HIGH FREQUENCY FIELDS EXCITED IN THE PLASMA. THE TEMPERATURE OF ELECTRONS IN THE GROUP IS MEASURED BY THE SPECTRUM OF THE BREMMSTRAHLUNG X RADIATION TO BE BETWEEN 0.8 AND 1 KEV, WHILE THE NUMBER OF CONSTITUENT PARTICLES IS 10 BILLION PER CU CM, AS MEASURED BY THE ABSOLUTE INTENSITY OF X RAY EMISSION. THE TEMPERATURE AND DENSITY ARE SUFFICIENT FOR CRITICAL POPULATION INVERSION IN THE PULSED MODE OF OPERATION OF THE LASER. FACILITY: AKADEMIIA NAUK UKRAINS'KOI RSR, FIZIKO-TEKHNICHNII INSTITUT, KHARKOV, UKRAINIAN SSR.

UNCLASSIFIED

USSR

UDC: None

TKACH, Yu. V., FAYNBERG, Ya. B., BOLOTIN, L. I., ~~BESSARAB, Ya. Ya.,~~
GADETSKIY, N. P., MAGDA, I. I., and SIDEL'NIKOVA, A. V.

"Laser Using Plasma-Beam Discharge"

Moscow, Zhurnal 'Eksperimental'noy i Teoreticheskoy Fiziki, vol 62,
No 5, 1972, pp 1702-1716

Abstract: Experiments to investigate the generation of stimulated radiation in the visible range of the spectrum are described. In the equipment described in this paper a pulsed electron beam with a pulse width of 90 μ s at a current of 35 amp and an energy of up to 40 kev was injected into a stainless steel plasma chamber with a diameter of 110 mm and a length of three meters. At the end of the chamber a water-cooled collector was placed for dissipating the beam power, reaching a level of as much as 1.5 kw. A block diagram of the equipment and an explanation of its operation given. These experiments demonstrated the possibility of using collective processes in a high-temperature plasma for pumping gas lasers; it is asserted, in fact, that this type of pumping in a plasma-beam discharge is best for obtaining oscillation in the shortwave end of the visible range. The authors, members of the Physico-Technical Institute of the Ukrainian Academy of Sciences, express
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USSR

UDC: None

TKACH, Yu. V., et al, Zhurnal Eksperimental'noy i Teoreticheskoy Fiziki, vol 62, No 5, 1972, pp 1702-1716

their gratitude to V. P. Tychinskiy, V. V. Slezov, V. D. Shapiro, and V. I. Shevchenko for their comments and advice.

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- 29 -

USSR

UDC 621.314.26

DOLMATOV, R. G., GRIGOR'YEV, V. S., BESSARABOV, G. V., ZUYEV, V. N., Taganrog
Radio Engineering Institute

"A Converter of the Mean Frequency of a Random Pulse Train"

Moscow, Otkrytiya, izobreteniya, promyshlennyye obraztsy, tovarnyye znaki,
No 3, Jan 71, Author's Certificate No 291220, Division G, filed 4 Aug 69,
published 6 Jan 71, p 124

Translation: This Author's Certificate introduces a converter of the mean frequency of a random pulse train. The device contains a flip-flop, switches, a shaper, two voltage sources of different polarity, and an integrating amplifier. As a distinguishing feature of the patent, the reliability of the converter is improved by including a threshold device whose output is connected to the inputs of the shaper and flip-flop and to the controlling input of one of the switches, through which the input of the entire device is connected to the second input of the flip-flop. The sources of voltage of opposite polarity are connected through the corresponding switches to the inputs of the integrating amplifier. The output of the amplifier is connected to the input of the threshold device.

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USSR

UDC 681.325.65

KONDALEV, A. I., BESSARABOV, N. V.

"Optimum Structures of a Class of Analog-Digital Converters"

Taganrog, Region. nauch.-tekhn. seminar po stat. analizu, modelir. i avtomatiz. kontrolya ob"yektov s konstrukt. slozhn. strukturoy--sbornik (Regional Scientific and Technical Seminar on Statistical Analysis, Modeling and Automated Monitoring of Objects With a Structurally Complex Design--collection of works), vyp. 6, 1972, pp 43-49 (from RZh-Avtomatika, Telemekhanika i Vychislitel'naya Tekhnika, No 11, Nov 72, abstract No 11B306)

Translation: The paper deals with problems of minimizing equipment by increasing the dimensionality of the memory in analog-digital functional converters with a large number of modules. A method is outlined for analyzing and synthesizing converters by means of subregions -- projections of weighting functions and their generating functions on the region of input variables. This method is applicable to any analog-digital and analog functional converters with assignment of the function at node points or in separate subregions of arbitrary dimensionality. Four illustrations, bibliography of three titles. L. P.

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USSR

UDC 681.3.001:51

KONDALEV, A. I., BESSARABOV, N. V.

"Optimizing the Parameters of Functional Converters With Smoothing by Auxiliary Signals"

V sb. Metody mat. i fiz. modelir. i optimiz. parametrov radioelektron. apparatury (Methods of Mathematical and Physical Modeling and Optimization of the Parameters of Radio Electronic Equipment--collection of works), No 1, Moscow, 1972, pp 116-119 (from RZh-Avtomatika, Telemekhanika i Vychislitel'naya Tekhnika, No 9, Sep 72, Abstract No 9B445)

Translation: The authors consider a functional converter of a single variable which reproduces the function F and which realizes additional smoothing by a kernel. It is noted that a very extensive class of kernels can be obtained merely by smoothing with auxiliary signals. Two illustrations, bibliography of two titles. V. D.

1/1

USSR

BESSEREZHNOV, A. S.

"Method of Producing Insecticide Extracts from Tobacco Plants"

USSR Author's Certificate No 301148, filed 2/03/70, published 24/06/71.
(Translated from Referativnyy Zhurnal Khimiya, No 5, Moscow, 1972, Abstract No 5N619 by T. K. Yudovskaya)

Translation: Tobacco plants or wastes are steeped simultaneously in two solutions -- in an acid solution and a solution of Na_2CO_3 at $40-60^\circ$ in sealed containers for 3-8 hr, then both extracts, after separation from the cellulose, are combined. Two hundred kg tobacco waste is ground to particles measuring 1-5 mm and placed in two containers, 100 kg in each, 100 l warm water ($40-50^\circ$) is poured into each one and 4.24 kg Na_2CO_3 is poured into one container, 5.04 l 98-100 % HNO_3 in the other container and stirred for 5-10 min. After 3-8 hr (when the specific gravity of the extracts reaches 1.013-1.020), the extracts are separated from the cellulose in a press or centrifuge, poured together and mixed. The product is 300-320 l of a finished product of the following composition (in %): dry matter 7-10, nicotine 1.0-1.5, protein 6-10, hydrocarbons 10-20, pectines 10-18, other material 6-9, remainder water, pH 6-7. The NaNO_3 side product produced upon neutralization is used as fertilizer.

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USSR

UDC: 681.32.001

BELEVTSEV, A. T., BESSHAPOSHNIKOV, Ye. A., YEFIMOV, V. P., MUZALEV, Ye. Yu., SEMENOV, B. A., CHIZHIK, S. P.

"Resistive Element for a Potentiometer"

USSR Author's Certificate No 293271, filed 1 Aug 69, published 11 Mar 71
(from RZh-Avtomatika, Telemekhanika i Vychislitel'naya Tekhnika, No 10, Oct 71, Abstract No 10B148 P)

Translation: This Author's Certificate introduces a resistance element for a potentiometer. The element is made in the form of two layers applied in sequence, one of them being a layer of rhodium. For the purpose of thermal stabilization of the resistance, the element utilizes a heat-treated chromium film as the rhodium sublayer. One illustration.

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USSR

UDC 632.4.42/.49A/z

CHIGRIN, V. V., BESSMEL'TSEVA I. M., POLYAKOVA, G. D., and ALESHIN, Ye. P.,
North Caucasus Scientific Research Institute of Phytopathology, Krasnodar

"Enzymatic Activity in Dormant and Germinating Uredospores of *Puccinia graminis f. tritici*"

Moscow, Sel'skokhozyaystvennaya Biologiya, Vol 5, No 4, 1970, pp 591-594

Abstract: Respiratory activity and respiratory rate were determined in moist uredospores of the agent of wheat stem rust after germination for 18 hours. The intensity of oxygen uptake by homogenates and intact spores in the presence of sodium linolate, sodium ascorbate, cytochrome C, phloroglucinol, and gallic, caffeic, and protocatechuic acids, as well as in the presence of sodium azide and sodium diethyldithio-carbamate was measured in dormant uredospores before and 18 hours after the start of germination. Respiration of uredospores sharply increased when they were moistened but decreased after 18 hours' germination to the rate of dormant spores. These changes in respiratory rate indicate that in the course of germination fats are utilized first and then carbohydrates. Copper-containing terminal oxidases play an important part in oxygen uptake by the uredospores, and the activity of these enzymes increases appreciably

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USSR

CHIGRIN, V. V., et al, Sel'skokhozyaystvennaya Biologiya, Vol 5, No 4, 1970, pp 591-594

during germination. The ability of the spores to oxidize caffeic and proto-catechuic acids and the large quantity of these acids in the spores suggest that there is an alternative mode of terminal oxidation through the polyphenol-polyphenoloxidase system.

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USSR

UDC 621.385.6.001.2

BESSERTNIK, V.N., RENCH, YE.I.

"Computation Of The Temperature Of The Collector Wall Of Type O Microwave Power Devices"

Elektron. tekhnika. Nauch.-tekhn. sb. Elektron. SVCh (Electronics Technology. Scientific-Technical Collection. Microwave Electronics), 1971, No 9, pp 26-33 (from RZh: Elektronika i yeye primeneniye, No 1, Jan 72, abstract No 1A150)

Translation: On the basis of an approximation of the distribution of specific dissipation power along the generating inner cavity of the collector, a computation is made by exponential and linear functions of the wall temperature of the collector, which makes it possible to evaluate the wall temperature at an early stage of planning of the collector. Measurements of the temperature in an actual collector showed good agreement with the results of computation. The error of the computation does not exceed 10 percent. 7 ref. Summary.

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1/2 021 UNCLASSIFIED PROCESSING DATE--30OCT70
TITLE--STRUCTURAL CHANGES IN MACROMOLECULES OF
POLY,4,VINYL,N,ISOANYLPYRIDINIUM BROMIDES -U-
AUTHOR-(05)-KIRSH, YU.E., BESSMERTNAYA, L.YA., TORCHILIN, V.P., PAPISOV,
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COUNTRY OF INFO--USSR

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2/2 021

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ABSTRACT/EXTRACT--(U) GP-O- ABSTRACT. THE ALKYLATION OF

POLY(4,VINYLPYRIDINE) WITH ISOAMYL BROMIDE GAVE

POLY,(4,VINYL,N,ISOAMYLPRIDINIUM BROMIDE) (I) CONTG. VARIOUS AMTS.

(ALPHA) OF THE TERTIARY N ATOMS. THE CHANGES OF THE INTRINSIC VISCOSITY

OF I IN WATER (OBTAINED BY EXTRAPOLATION OF THE REDUCED VISCOSITY (ETA)

AT I CONCN. LESS THAN 0.01 G-DL. ONLY, SINCE ABOVE THAT CONCN. ETA

BEGINS TO DECREASE) INDICATE THAT I MOLLS. COIL UP AT THE LOW ALPHA

VALUES, BECOMING SMALLEST AT ALPHA 12.2PERCENT, AND THEN BEGIN TO UNCOIL

WITH ALPHA INCREASE LESS THAN OR EQUAL TO 40PERCENT. THESE RESULTS WERE

CONFIRMED ALSO BY THE CHANGES OF I ELECTROPHORESIS RATE WITH ALPHA.

FACILITY: MOSK. GOS. UNIV. IM. LOMONOSOVA, MOSCOW, USSR.

UNCLASSIFIED

Publications

USSR

UDC 636.619

SHISHKOV, V. Ye., BESSMERTNYKH, A. A., and MUSTAFAYEV, G. A.

Profilaktika i Likvidatsiya Yashchura (Prophylaxis and Eradication of Foot-and-Mouth Disease), Moscow, Rossel'khozizdat," 1971, 64 pp

Translation:

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BESSONENKO, V.V.

SO:IPRS 55015
25 JAN 1972

UDC: 614.4(-22):65

DEVELOPMENT OF AN AUTOMATED SYSTEM OF MANAGEMENT OF URBAN EPIDEMIOLOGICAL SERVICE

Article by V.V. Bessonenko, M.R. Tinkov, V.I. Slutsky, N.A. Ostapenko, Novokuznetsk Municipal Health Department (headed by V.V. Bessonenko) and Chair of Social Hygiene and Public Health Organization (headed by N.S. Tainbar, candidate of medical sciences), Novokuznetsk Institute for the Advanced Training of Physicians (vice-chancellor: Professor G.I. Statkov); Moscow, Sovetskoye Stravochodrennoye, Russian, No 12, 1971, submitted 4 May 1971, pp 42-45]

Epidemic control work and, in particular, control of intestinal infections occupies a special place in the public health system. For prompt and complete detection and decontamination of the source of infection, establishment and neutralization of means of transmission of the pathogen, public health organizers must concentrate maximum attention on development of new and more effective methods in medical service work.

In 1969, the Novokuznetsk Municipal Health Department determined to optimize the information system with respect to incidence of intestinal infections. Under the supervision of V.I. Slutsky, candidate of medical sciences and senior instructor at the Novokuznetsk Institute for the Advanced Training of Physicians, new approaches have been developed for investigation of the epidemic process and organization of supply of information at different levels of management. Prototypes of epidemiological examination cards have been created which permit gathering fuller and more objective information. A change in the method of gathering information involving mandatory interview with the patient himself while in the hospital by a specially assigned assistant to the epidemiologist, made it possible to obtain important information pertaining to the probable circumstances involved in the infection.

The results of sanitary-epidemiological examination of environmental objects are recorded in a formal document. This document facilitates qualitative evaluation of the degree of contamination which is of great interest for correlation analysis.

All information pertaining to intestinal infections is concentrated in a specially created service, the Laboratory of epidemiological analysis, to which it is forwarded by teletype. The information gathered in the form of

public health

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